

**REMARKS/ARGUMENTS**

This Amendment is submitted in response to the Office Action dated September 11, 2007.

**I. Introduction**

Claims 3, 7-10, 12, and 15 have been amended to correct typographical errors. Claims 3, 7, and 15 have further been rewritten in independent form as they depend from canceled claims.

Claims 1, 2, 13, and 14 have been cancelled without prejudice. Accordingly claims 3-12 and 15-17 are now pending.

In the Office Action the Examiner objected to claims 3 and 15 because of informalities. Claims 3 and 15 have been amended to correct the informalities.

The Examiner rejected claims 1-4 and 13-16 as being anticipated under 35 U.S.C. §102(e) by U.S. Patent Publication No. 2004/0184483 A1 to Okamura et al. (hereinafter "the Okamura et al. publication").

In addition the Examiner rejected claims 5 and 17 under 35 U.S.C. §103(a) over the Okamura et al. publication in view of U.S. Patent No. 5,898,673 to Riggan et al. (hereinafter "the Riggan et al. patent").

In addition the Examiner rejected claim 6 under 35 U.S.C. §103(a) over the Okamura et al. publication and the Riggan et al. patent further in view of U.S. Patent Publication No. 2003/0152028 A1 to Raisanen et al. (hereinafter "the Raisanen et al. publication").

In addition the Examiner rejected claims 7-9 under 35 U.S.C. §103(a) under the Okamura et al. publication further in view of U.S. Patent Publication No. 2004/0228356 A1 to

Adamczyk et al. (hereinafter "the Adamczyk et al. publication").

The Examiner objected to claims 10-12 as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form. Claims 10-12 have been so rewritten, and therefore **claims 10-12, as amended, are patentable**. Applicant thanks the Examiner for this finding of allowability.

As will be discussed below, none of the pending claims are anticipated or rendered obvious by the applied references.

## II. Claims 3, 4, 15, and 16 are Patentable

The Examiner rejected claims 3, 4, 15, and 16 as being anticipated under 35 U.S.C. §102(e) by the Okamura et al. publication.

Claim 3 contains the following feature (emphasis added):

*operating the control node to generate the link bandwidth utilization information corresponding to said second link **from an estimate of bandwidth that will be used** on said second link by services over which said control node does not have admission control*

The Examiner states in No. 3 of the Office Action that "unit 15 calculates a load balancing process on the basis of the statistical information collected by the network control device 10 ... [0185] lines 3-9" and "the load balancing control unit 15 calculates a load state of the path set within the network at the present". However, this does not describe "**an estimate of bandwidth that will be used**".

From the Okamura et al. publication, [0200] (emphasis added): "The statistical information collecting unit 11 **accesses each of the routers** within the network **at the interval of the predetermined period**". Then, "At this time, the statistical information collecting unit 11 acquires the information retained by the routers for the **bandwidth (Wg) actually used** for the GS flow and for the **bandwidth (Wb) actually used** for the BES flow."

It can be seen that this process is not "as estimate of bandwidth", or of "bandwidth that will be used".

For at least these reasons claim 3, as amended, is patentable over the Okamura et al. publication.

Claim 15 has the feature:

*from an estimate of bandwidth that will be used on said second link*

For the same reasons as above for claim 3, claim 15, as amended, is patentable over the Okamura et al. publication.

Claim 4 contains the feature (emphasis added):

*wherein said link bandwidth utilization information corresponding to said second link is further generated **as a function of a link utilization scaling factor***

The Examiner states on No. 3 of the Office Action: "the load balancing control unit 15 calculates a balancing ratio of the BES flow between the routes" [0186] lines 5-6. However, this does not teach or suggest "a link utilization scaling factor". The Okamura et al. publication balances loads among various possible routes, but does no **scale** any of the route utilization information with a **factor**.

For at least this reason, and because claim 4 depends from allowable claim 3, **claim 4 is patentable over the cited art.**

Claim 16 contains the following feature (emphasis added):

*wherein said link bandwidth utilization information corresponding to said second link is further generated **as a function of a link utilization scaling factor***

For the above reasons, and because claim 16 depends from allowable claim 15, **claim 16 is patentable over the cited art.**

### **III. Claims 5 and 17 are Patentable**

The Examiner rejected claims 5 and 17 under 35 U.S.C. §103(a) over the Okamura et al. publication in view of the Riggan et al. patent.

Claim 5 contains the following feature (emphasis added):

*where said link bandwidth utilization information corresponding to said second link is further generated as a function of the **physical link capacity of links used to couple** Internet service users to said second link*

The Examiner states on p. 6 of the Office Action:

Nevertheless, Riggan et al. teaches 'if the signal from the network management system 206 indicates that the QoS threshold is exceeded, then at least a first portion of the data, e.g., excess cells, are routed to node 300b via one or more of the secondary networks 212a-212c.' "

The Examiner goes on to state:

"the link bandwidth utilization information is generated as a function of the physical link capacity of the links and an average of the physical link capacity because 'a quality of service (QoS) traffic contract bandwidth limit and a corresponding QoS threshold' can be established (Riggan et al. column 4, lines 36-37)."

There are two problems with this analysis. First, the Riggan et al. patent does not utilize "physical link capacity", it uses QoS thresholds to determine capacity issues.

Second, there is no teaching or suggestion in the Riggan et al. patent of "the physical link capacity of **links used to couple** Internet service users to **said second link**" (emphasis added). There is no teaching or suggestion in the Riggan et al. patent of looking at link capacity (or even QoS thresholds) on one link to use for link bandwidth utilization information on another link.

For at least these reasons, and because claim 5 depends from allowable claims 3 and 4, **claim 5 is patentable over the cited art.**

Claim 17 contains the feature:

*said link bandwidth utilization information corresponding to said second link is further generated as a function of the physical link capacity of links used to couple Internet service users to said second link*

For the above reasons, and because claim 17 depends from allowable claims 15 and 16, **claim 17 is patentable over the cited art.**

**IV. Claim 6 is Patentable**

The Examiner rejected claim 6 under 35 U.S.C. §103(a) over the Okamura et al. publication and the Riggan et al. patent further in view of the Raisen et al. publication.

Claim 6 contains the feature:

*wherein said control node generates a control message to reduce the amount of bandwidth allocated to best effort traffic on one of said first, second and third links, when a service request for a service requiring a guaranteed amount of bandwidth on said one of said first, second and third links is received and said guaranteed amount of bandwidth is not available due to best effort traffic on said one of said first, second and third links.*

The Examiner acknowledges in No. 6 of the Office Action that:

"Okamura et al. and Riggan et al. fails to specifically disclose said control node generates a control message to reduce the amount of bandwidth allocated to best effort traffic on one of said first, second and third links, when a service request for a service requiring a guaranteed amount of bandwidth on said one of said first, second and third links is received and said guaranteed amount of bandwidth is not available due to best effort traffic on said one of said first, second and third links, as claimed."

The Examiner goes on to state:

"Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to reduce the amount of bandwidth to best effort traffic on one of the first, second and third links if a service requiring a guaranteed amount of bandwidth is not available because this would accommodate when 'measurements show that the QoS situation in the IP network suddenly

deteriorates (for example, the delay increases)' (Raisanen et al. [0060] lines 1-2)."

Applicant agrees that the Raisanen et al. publication apparently shows limiting best-effort traffic, but does so in response to "the QoS situation in the IP network suddenly deteriorates". This does not teach or suggest doing so "when a service request for a service requiring a guaranteed amount of bandwidth on said one of said first, second and third links is received and said guaranteed amount of bandwidth is not available".

Further, the Okamura et al. publication describes finding routes for requested traffic, not limiting existing traffic in order to accommodate requested traffic. Therefore, there would be no reason to look to the Raisanen et al. publication for guidance on how to do so.

For at least these reasons, and because claim 6 depends from allowable claims 3,4, and 5, **claim 6 is patentable over the cited art.**

**V. Claims 7-9 are Patentable**

The Examiner rejected claims 7-9 under 35 U.S.C. §103(a) under the Okamura et al. publication further in view of the Adamczyk et al. publication.

Claim 7 contains the following features (emphasis added):

*when it is determined from said maintained set of link bandwidth utilization information that there is insufficient bandwidth available to satisfy said service request, **determining if a user to whom said service request corresponds is using other services***

**which can be terminated to provide the bandwidth required to satisfy said service request.**

The Examiner states in No. 7 of the Office Action:

"However, Okamura et al. fails to specifically disclose that determining if a user to whom said service request corresponds is using other services which can be terminated to provide the bandwidth required to satisfy said service request, as claimed."

The Examiner goes on to state (emphasis added):

"and further 'if the user experience for either the video stream or the game is unacceptable, the user will have to make their own admission control decision and pause or shut down the one they wish to have lower priority' (Adamczyk et al. [0154] lines 18-22)."

There are multiple differences between the Adamczyk et al. publication disclosure and the above claim features.

First, "it is determined from said maintained set of link bandwidth utilization information that there is insufficient bandwidth available to satisfy said service request". The user is not determining "insufficient bandwidth".

Second, the feature: determining "from said maintained set of link bandwidth utilization information insufficient bandwidth available" is nothing like the Adamczyk et al. publication's "if the user experience . . . is unacceptable".

Third, the feature: "determining if a user to whom said service request corresponds is using other services which can be terminated to provide the bandwidth required to satisfy said service request" is the opposite as found in the Adamczyk et al. publication. There, the determination is: "if the user experience for either the video stream or the game



**is unacceptable"**. The Adamczyk et al. publication teaches having the **user** determine if the experience is unacceptable, and the **user** determining if there is another service the **user** could pause or shut down". Determined capacity is not an issue in the Adamczyk et al. publication.

For at least these reasons, **claim 7 is patentable over the cited art.**

Claim 8 contains the feature (emphasis added):

*when it is determined that said user to whom said service request corresponds is not using other services which can be terminated to provide the bandwidth required to satisfy said service request, operating the control node to send a message denying said service request.*

The Examiner states on No. 7 of the Office Action:

"Okamura et al. discloses when it is determined that said user to whom said service request corresponds is not using other services which can be terminated to provide the bandwidth required to satisfy said service request".

This is simply not the case. Nothing in the Okamura et al. publication teaches or suggests determining whether a user is or is not using other services which can be terminated. Further, as described above, the Adamczyk et al. publication does not add this feature.

For at least these reasons, and that claim 8 is dependent on allowable claim 7, **claim 8 is patentable over the cited references.**

Claim 9 contains the following features (emphasis added):

*when it is determined that said user to whom said service request corresponds is using other services*

*which can be terminated to provide the bandwidth required to satisfy said service request, **presenting the user with the option of terminating the services being provided** to said user which can be used to provide the bandwidth required to satisfy the service request.*

For the reasons argued above, neither the Okamura et al. publication nor the Adamczyk et al. publication teach determining "that said user to whom said service request corresponds is using other services which can be terminated". Further, there is no teaching or suggestion in either the Okamura et al. publication nor the Adamczyk et al. publication of "presenting the user with the option of terminating the services being provided".

The Examiner simply states that it would be obvious for one to do so. As argued above, neither reference ever determines "that said user to whom said service request corresponds is using other services which can be terminated", so it could not be obvious to present "the user with the option of terminating the services being provided".

For at least these reasons, and that claim 9 is dependent on allowable claims 7 and 8, **claim 9 is patentable over the cited references.**

#### **VI. Conclusion**

In view of the foregoing amendments and remarks, it is respectfully submitted that the pending claims are in condition for allowance. Accordingly, it is requested that the Examiner pass this application to issue.

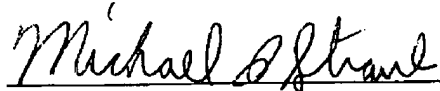
If there are any outstanding issues which need to be resolved to place the application in condition for allowance **the Examiner is requested to call (732-542-9070) and schedule**

an interview with Applicant's undersigned representative. To the extent necessary, a petition for extension of time under 37 C.F.R. 1.136 is hereby made and any required fee in regard to the extension or this amendment is authorized to be charged to the deposit account of Straub & Pokotylo, deposit account number 50-1049.

None of the statements or discussion made herein are intended to be an admission that any of the applied references are prior art to the present application and Applicants preserve the right to establish that one or more of the applied references are not prior art.

Respectfully submitted,

January 2, 2008

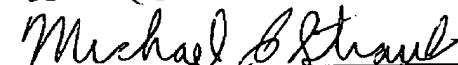
  
Michael P. Straub Attorney  
Reg. No. 36,941  
Tel.: (732) 542-9070

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